

bone, and is *inserted*, by a small tendon, into the fascia adjoining the innermost sesamoid (fig. 8, I. 1).

The second single interosseous *arises* from the plantar surface of the *os naviculare* and one of the cuneiform bones, and is *inserted* into the outer surface of the proximal end of the proximal phalanx of the index digit by a small tendon (fig. 8, I. 2).

The third single interosseous muscle *arises* from the fascia on the under surface of the proximal end of the middle metatarsal bone, and is *inserted* into fascia on the inner side of the inner sesamoid bone of the middle digit (fig. 8, I. 3).

The fourth single interosseous muscle *arises* from the strong tendinous fascia covering the plantar surface of the cuboid, and is *inserted* into the inner side of the proximal end of the proximal phalanx of the outermost digit (fig. 8, I. 4).

The existence of the interossei of the foot is mentioned by Meckel (*loc. cit.* p. 461), but nothing is said in the way of description.

A very strong and thick ligamentous fascia covers the under and outer side of the calcaneum; muscular fibre contained in and arising from this is inserted into the head of the outermost metatarsal bone (fig. 8, *Ab. o. m. q.*). Query,—Does this represent Prof. Huxley's *abductor ossis metacarpi quinti*, only here attached to the fourth instead of to the fifth metatarsal?

After having thus passed in review almost all the muscles of the *Hyrax*, it might perhaps be expected that we should express some decided opinion as to the value of these in reference to the zoological affinities of the animal. But this we are not prepared to do.

It is true that such characters as the attachment of the sternomastoid to the mandible, the development of the sterno-scapular, the very small size of the deltoid, but enormous proportions of the triceps, and great extent of the brachialis anticus, together with the arrangement of the glutei, the vast size of the semimembranosus, the attachment of the extensor longus digitorum to the femur, &c., tend rather to confirm than otherwise those ungulate affinities which have been attributed to the *Hyrax*.

But, on the other hand, we find so many resemblances to the Rodentia, as exemplified in the Guinea-pig (specially selected by us for comparison as the most Pachyderm-like of accessible Rodents), that we are indisposed, from the consideration of the muscular structure alone, definitely to assign the *Hyrax* to one or other of the *existing* orders constituting the class Mammalia.

2. DESCRIPTION OF A NEW SPECIES OF INDIAN PORCUPINE. BY
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SOCIETY.

(Plate XVI.)

About three years ago I received a communication from our excellent Corresponding Member, Colonel Sir William Thomas Denison,



J. Wolf del., et lith.

HYSTRYX MALABARICA

144 H. Hartert imp.

K.C.B., Governor of Madras, inquiring of me whether anything was known in Europe of a second Indian Porcupine, distinguished from the common species by having some of its quills of a deep orange-colour. Upon my replying that this Porcupine appeared to be unrepresented in our collections of animals either living or dead in this country, and would moreover probably prove new to science, Sir William promised to do his best to obtain living specimens of it for the Society's Menagerie. The first examples of this animal obtained by Sir William for transmission to this country died, I believe, before they were shipped. But in the latter part of last year Sir William was successful in obtaining four other living specimens, which reached this country in safety on the 22nd of December last. Three of these Porcupines are still living in the Society's Menagerie. The fourth died a few days after its arrival, and was found one morning already partially devoured by its carnivorous companions. Enough, however, remained of it to make a tolerably good skin, which, together with the skull, I now exhibit. Upon these materials I propose to attempt to give characters to this hitherto undescribed species.

Before doing so, however, I should mention that this species, although it has never yet been described, and, as far as I can ascertain, has never reached Europe before, alive or dead, has been already provided with a name, which I do not propose to alter. Mr. Francis Day, Fellow of this Society, late of H. M. Madras Medical Service, in his work on the native Indian state of Cochin, called 'The Land of the Permauls,' published at Madras in 1863, has spoken of this animal as "The Orange Porcupine, *Hystrix malabaricus*," and given some details respecting it*. Mr. Day has also kindly supplied me with some further notes respecting it, which I shall give presently.

I commence, however, by characterizing the species, which belongs to the typical *Hystrix*, and is very closely allied to *H. leucura*, as

HYSTRIX MALABARICA, sp. nov. (Pl. XVI.)

H. cristæ setis purpurascenti-nigris, unicoloribus; rostro pilis minutis obsito: colore corporis antici purpurascenti-rubro, spinis ad basin aurantiacis, inde ad apicem purpurascenti-nigris: spinis dorsi elongatis, aliis aurantiaco-rubro et nigro, aliis, sicut in specie vulgari, albo et nigro annulatis: dorsi postici linea mediali distincta, e spinis aliis albis, aliis aurantiacis composita: cauda longa, spinis aliis albis, aliis aurantiaco-rubris.

Long. tota a rostro ad basin caudæ 28·0 poll., caudæ 8·0.

Hab. India Meridionalis, prov. Cochin.

Obs. Affinis *H. leucuræ*, sed spinarum colore, rostro minus setoso, et cauda longiore distinguenda.

Although the general external appearance of this Porcupine is remarkably different from that of *H. leucura*, so that the living animal strikes one at the first glance as being undoubtedly distinct, I have been somewhat disappointed, on comparing the two skins together, to

* Land of the Permauls, pp. 446, 447.

find how difficult it is to detect any very decided differences in their structure. The muzzle in the present specimen of *H. malabarica* (which is the only individual I have been able to examine) seems to be decidedly less clothed with hair than in *H. leucura*. This is one of the few points in which *H. leucura* differs externally from *H. cristata*, and in this respect the present specimen seems more like *H. cristata*. The whole of the short spines and hairs of the anterior portion of the body in *H. malabarica* are dark reddish orange at their bases, growing into purplish brown at their tips; and the same is the case with those of the flanks and legs. The elongated spines of the middle of the back are some of them black, annulated with white, just as in *H. leucura*; others, more especially towards the sides, where these latter rather predominate, have the white replaced by a bright orange-red. The medial line of the rump is well defined, as in *H. leucura*; but the white spines are mixed with others wholly orange. This is likewise the case with the spines round the base of the strong spines which terminate the tail: some of these are wholly white, and some wholly orange. The strong spines which surround the tail, and extend beyond its extremity, are mostly wholly white, with some wholly orange intermixed. In the centre of these are about twelve of the singular hollow truncated quills mounted on pedicels, just as in *H. leucura* and *H. cristata**. About one-fourth part of these abnormal quills are orange; the others are white.

As the cranial characters of the species of *Hystrix* are generally very well marked, and indeed the only test by which the species can be certainly distinguished, I was in hopes of finding in the cranium of *Hystrix malabarica* some more certain evidence of its real distinctness from *H. leucura*. I have therefore carefully compared the skull of the new species with a fine series of six skulls of *H. leucura* in the British Museum †, in doing which I have received the valuable assistance of my friend Dr. Peters, who happened to be present at the occasion. The skull of *Hystrix malabarica*, which is that of a very old animal with the molar teeth worn very low and the cranial sutures nearly obliterated, agrees in the shape of the nasal and intermaxillary bones with *H. leucura*. As in the latter species, so in *H. malabarica* the nasal bones have their sides nearly parallel with the hinder margin, terminating nearly in a line with the anterior edge of the orbit, and the nasal processes of the intermaxillaries are broad and truncated. At first I was inclined to think there was some difference in the pattern of the molar teeth of the two species, those of *H. malabarica* being surrounded by a complete cingulum of enamel, and the internal areas being completely isolated, which is not the case in *H. leucura*. But this, I suspect, is only due to the age of the specimen. It would therefore be desirable to have further specimens of the skull of *H.*

* I am not aware whether any explanation has ever been given of the use of these curious quills. My impression is that they serve to act as a rattle, which is thus formed, as in the Rattle-Snakes (*Crotalus*), by a cutaneous development at the end of the tail.

† *H. cristata* and *H. leucurus* of the 'Catalogue of the Bones of Mammalia in the British Museum' (1862), p. 191.